

39. Miss and Goshawk eggs.  
40 } Spalding Spgs  
41 } St. Charles & Reeve farms. —  
    Gatlinburg, Miss.  
42 Shields on all  
43 Yeager, S. Dept. of man.  
44 Frankfort, Ky.  
45 Jacksonville & N. Green River  
46 Bonham SW of Frankfort  
47 Mc Gire & B. Mc Gire Green —  
48 49. Cebelie egg sp  
50 E of Frankfort, Cincinnati  
51 Sugar Creek  
52 Watson, Franklin Co.  
53 54. Auburn  
55 Zelby, La Grange  
56 Cynth.  
57 Way on stackhouse slab.  
58 } D. Brown's on the hill in  
59 } Yeager in Henderson  
60 } farms.  
61. Coal in Horsley Henderson  
    farm. B. of old Coal  
    Shiel, Gatlinburg  
    Spalding Spgs.  
62. The most abundant  
    Hudson River shale  
    C. of the Hudson  
    page Spalding Den.

1. Lebanon to Morris
2. Morris to Lebanon.
3. Lebanon to Morris
4. Morris, Coniaage.
5. Pleasant Point, Newtonville  
6 miles in the valley
6. Marathon, Decatur, Heit  
7. Heit, Decatur, Ada Run
8. Fairview, Russellville
9. Mt. Carmel
10. Washburn Hill & slate Hill
11. Springtown, Point on Ruby Fork
12. Caves W to Russell & Beaverville
14. Carmel, Russell Hill, St. Hwy 140
15. Janssen Run, N of Davidson school
16. Sinking Springs & East
17. East to Ogallala on Pebbles
18. Pebbles
19. Pebbles
20. SW of Sinking Springs
21. Cedar Chapel, SW of Sinking  
Springs.
22. Crooked Cr. SW of Sinking 5680
23. W of N end of Sinking 5680
25. Potter's Mill, Baudette
26. Bain bridge
27. N of Bainbridge, Leesburg
28. New York, Sennville
29. Latona, City of church
30. NW of Hilltop
31. W of Hilltop, Berryville
32. East of Berryville
33. Berryville to Harris
34. 35. Harris, NB of
36. NE of Harris, Hilltop
37. Hilltop, Baudette
38. Liley Hill
39. Ogallala

1

Lebanon,  
1/4 mi N of Symmes  
bordering line.  
*Dianthus retroflexa* is  
8 ft above creek, - above  
780

Lebanon.

From hotel 2 mi E on  
W. H. Wright on road,  
where creek borders with  
SE of 767, on east side  
of  $84^{\circ} 10'$  vertical line.  
*Retrosa* at 765 USF, S.

Lebanon

2 1/2 mi S East Madison on  
school road.

*Retrosa* at 805 USF S.

Lebanon,

SE 3/4 mi to spur 890  
Then E 1 mi to W branch  
of Hall's creek.

*Retrosa* <sup>Leptocoma</sup> at 805  
Dalmatella, Pl. Anderson

Worow

Horse feed — — — 35 ct

Dinner myself &

driv. car 65

St Charles Hotel - 1.00

## Moline

1 1/2 mi N, then 1/2 mi W,  
+ 1/8 mi N to Halls  
Creek.  
Dunite outcrops at  
about 810 NSG S.

At about 780, on W  
side of bridge, in brown  
dunite, is strongly  
veined dolomitic limestone  
steeple with white  
veining about NNE.

## Lebanon

4 mi S E to Winding  
ton school. Then 2 mi  
SE to small bridge  
in bend of road.

Petrology at 805 NSG S

## Stubbs Hill

1 1/2 mi N, then 1 mi W  
to road crossing.

Petrology at 820 NSG S.

## Lebanon

2 mi S to corner 845, then  
1 mi W + 1/8 mi NW to  
house.

Petrology, dolomitic  
dolomitic at 830 NSG S

## Lebanon

5 mi N of town at  
southern edge of town.  
Modular layer at top  
of Granular = 5 ft  
below bend in road  
where road always traction  
line turns off NE  
in approaching town.

Small Lebanon S to  
Hopkinsonville, from S edge  
of hill about 1 1/2 mi E, at  
road corner 817.

Top of hill about full of  
platy dolomitic limestone =  
802. Above this the  
retrograde should form at  
850 mft. I doubt  
whether this actually is  
present in hill S of road E of 817  
more or

2 1/2 mi S W to peak  
Bridge school road,  
From school 1/2 mi NW  
then SW to second  
peak crossing.

Petrology, dolomitic  
dolomitic, at 860  
NSG S, S of road crossing

From first break of  
true West, about  $\frac{1}{4}$   
mi E of road crossing  
826, in N side of road,  
playa surface sand  
cycles about 835.  
Rth over Ditch at  
860, as well as 3 cm  
gullies.

Worms,  
4 mi S, straight line,  
to road about  $\frac{1}{2}$  mi  
W of Rossburg, then  
 $\frac{3}{4}$  mi SW to break of  
SE of 882, on stream  
Bethesda & Septaria  
Dolomella at 848  
USGS.

### Craigie

10 mi SW, then  $\frac{1}{4}$  mi W  
creek, then E up creek,  
Bethesda, top of  
cycles above  
playa of glacial surface  
11 ft above creek at sand  
crossover. = 865 USGS.

### Pleasant Plain

From W along RR, then  $\frac{1}{3}$   
mi NW,  $\frac{1}{8}$  mi SW to  
cemetery, then W down  
stream.

Rth over a ~~Y~~ at 860 USGS about.

### Newville

#### Henry Shalebed.

bounding line.

West of village  
7.52. 9.52, 12.52 West  
7.00 9.00 11.00 East

### Edentown

On creek SE of town and  
NE of Nathan station  
No exposure of any kind  
seen here.

### Newtonville

W of town, at edge of town,  
Rth over at 880 USGS.

### Monterey

W of town to Patterson  
creek, then NW along  
creek road to road  
leading N to pipe at  
point W of 887 corner  
Lynx Hill at 840 USGS.

## Marathon

S E of town 2 mi to  
out take of Little Missouri  
River.

Where road turns N  
parallel to W bank of  
river, begins with  
Cyclobium & continues  
at about 870 usgs,  
but not firmly occurs in  
5 ft sandy layer  
to the retrograde horizon  
although the lithology  
of the rock looks all right.

## Decatur

5 miles, toward Heitt,  
at house in N end of  
town, between letters R & S  
in ROAD, 1 mi N of Heitt.  
Stephania concinna  
& Stephaniana at 890  
usgs.

## Dinner at Heitt.

Myself driven to house  
spiced. 150

## Heitt at or

N of Heitt.

Steph. concinna 20 ft  
above Leptozoma at 840 usgs

## Heitt.

South from where road  
from S E turns sharply  
S W.

Stephania concinna  
& Stephaniana  
at 900 usgs, in road.  
Possibly in place.

## Decatur

at Cl rock bridge 840 usgs

## Decatur

E to Washburn creek.  
Stephania concinna  
in creek on S side of bridge  
at 796. From this Leptozoma  
layer is estimated at 793.  
usgs above.

## E to Ada River

Stephania concinna in order  
2 in (bottom) = 55 ft  
above creek at bridge.

$$55 + 760 = 815 \text{ ft for the}$$

## Stephania

Leptozoma at 755 usgs  
in the large rippled sand  
above this bank, now  
running NE

E of Fairview 3½ mi  
to Hills Creek.

St. John's river section  
+ *Anthonothorus*  
*casei*, at level below  
bridge = 865-710,  
Fairview - 700's  
and calculated 705-710.

Rest of Russellville

less than 1 mile  
to road corner

Then N to creek

Lyon followed course  
of south branch and  
left area + descended  
at one point about

Russellville

From N, ½ mile to  
NW fork of Eagle, then  
up stream short dis-  
tance + up fork  
eastward.

Left area, drift at a  
above Lyon, at  
870 n.s.g.s.

Manchester,

Dayton road branching  
off from Busterville  
road NW 1 mile.

Left area + drift area  
at about 644 n.s.g.s.

With St. John's river  
on evidence of surface

n. express ct. - 29

Dayton bridge - 37

less than 1 mile 1.00

2 miles to Wilmington 1.00

3 miles to Wilmington 1.00

~~Express road~~

B good place letter  
Wilmington to Hillsboro 1.00

My accounts 80

Hillsboro map

Bainbridge Black bridge

Hotels bill

Carmel limestone 2.00

McCaffrey

H A Pavley 5226 Hunter  
Ave. Norwood Ohio  
To Samuel Coyle

## Carmel

$\frac{1}{3}$  mi E to 2nd house  
in N side of road, then  
S into gully. Black  
shale down to 920.  
At first house N of  
Heads Branch, on S side  
of road,  $\frac{1}{8}$  mi E of Carmel  
top of West Kun in at 900  
Carmel.

10 mi W, then  $\frac{1}{8}$  mi S,  
then  $\frac{1}{8}$  mi SW, at highest  
point along road.  
Black shale at 980.

$\frac{1}{8}$  mi farther SW, then  
E up first road,  
to abrupt turn in road.  
Black shale at 1020.

From last locality  $\frac{1}{4}$  mi  
SW to Black shale at 990  
and above.

## Carmel

1 $\frac{1}{2}$  mi SW in other  
line to first road  
turning off obliquely W.  
Black shale at 1050.

Lower part of road  
surface is covered  
by clayey silt.

## Washburn Hill

At road corner directly  
W of line of Washburn Hill  
Black shale at 1000  
N of this road comes the  
Cleat sandy probably  
clay down to 980.  
West of last locality  
the Cleat sandy white  
clay goes down to first  
creek: 980.

West of creek Cleat sandy  
shows up at 980  
From corner 970 N toward  
Franklin Branch the  
Cleat sandy is up  
down to 960.  
Top of West Kun in at  
945 just S of Franklin  
Branch.

South of road about 970,  $\frac{1}{3}$   
mi E, as far as next  
road corner, Black shale  
& Cleat sandy which is  
present by on and off  
as 1020.

Road corner half way between  
975 corner & St. Joe Hill  
School. Top of West Kun  
at 1005.

Eliot Blackwelder  
Has left Univ of Illinois  
Gone to private less onch  
Twenhafel gone to  
Anti-cath again.

Charles Stirling had side  
South Boundary, a dead  
String town

1/2 mi S, at road  
Crosses Big Hill below 800 ft  
1040 ft. road to stone  
stair, which may be  
Mineral

Realtors School

1/4 mi E of houses  
Mg at road at 1020.

Point

1/4 mi E, 1/4 mi N to  
Rapids Finger, then E 1 mi  
to where lane turns off N  
Beyond this 1/2 mi E,  
Here base of Keweenaw  
Shale by house is at 845  
and top of Mineral by house  
here is at 835.

Points

1/8 mi E, S of Johnson's  
on N of Point Creek.  
Mineral top to 850.

Caves

1/2 mi E, along road  
going south  
most show a 1/2 mi  
at 860

Caves

1/2 mi W on highest land  
east of houses on N side of  
road.

Black shale on Mineral at  
about 875

At next houses West,

1/3 mi W of Caves, Black  
shale rock on Hilltop  
20. on West Main and  
Caves

1/3 mi west. West of first  
large gully N of the Caves  
off of West Main out  
890 feet.

Barrett Mill

1/2 mi NE, before reaching  
corner 935.

West Main as far up as  
890. Top mineral 800.

Beaver Mill

1 mi E, W of Heads  
Branch.

West Main off to 860

Carmel

1/3 mi N.

West Main up to 960.

Barrett's Mill

3 1/4 mi S E, 1/8 mi N W  
of Carmel 899.

Top of Hillside at 880

Ernest Black

Shale at 900.

Stulty Hill

Bridge SE of road cross 881

West Main with bridge to  
new. 855 about

West road cross 881.

Black shale at 860

Farther to west of road  
beyond house on N side

of road. West Main  
up to 865

Washburn's Shale

E. F. Washburn up to  
880.

West of Washburn  
about before reaching  
creek crossing.

West road up to 880

Road to road 949

at stone 2 1/2 mi E of  
Carmel.

West road up to 910

Jarmigan Park.

From road cross 949  
and Jarmigan 1/2 mi  
north to

Monroe at 960 - top.

Black shale at 960 or 970  
farther south.

Jarmigan Park

SW of road cross.

Black shale clay-alumina  
beneath this Black  
shale.

Then NW to road cross  
and S with 1/8 mile to  
West Main up to 935.

Dandam school.

Immaculate school  
H. L. Brown as. in place  
at 935. exact.

Top of West Main is  
about 10 feet above  
Sandstone about 2 ft  
thick.

Farther north West  
Main at 915 just  
before Kerby home.

## Stinking Springs

1 mi N. then east from  
near road corner 845  $\frac{1}{3}$  mi,  
more up to 860.

2 1/2 mi E of Stinking  
Springs dolomite - Black  
shale at 900.

Same road as above.

1 1/2 mi E of Stinking Springs  
piedmont

more up to 830  
in the Black shale with  
10 feet above.

2 mi E of Stinking Sprg  
road, when creek road  
turns up hill SE.

more up to 813.

Crater 741

1/8 mi NW. Monroe = 790  
at top.

East of Crater 741  
Top of Monroe at 790 ft  
1/2 miles then drops to  
775 at foot of slope  
on N side of road  
at 2 1/2 mi E of Crater  
741

## Norman school

1/8 mi N. road W.

Top of Monroe at 780

East of Norman school  
the top of the Monroe  
droops for 1/8 mile to 760

1/8 mi W of Crater 741  
at junction with  
piedmont topsoil 790 m.s.n.m.  
is seen at 740.

## Byington

effacement swamp.

more up to 655

3 1/4 mi E of Byington

Directly E of bridge

Monroe up to 655

Pebbles - Black bed

*Diplodonotus* and *Agassizella*

*Ceratostoma neglecta*

*Streptostrobla grossa*

*Streptostrobla* from *Streptostrobla*  
deflected to another area.

Ceratostoma wadsworthi  
species not as common

*Neophaenostoma diffusum*  
*Whitfieldella* leading to  
*Cyathostoma*.

*Dalmatia leucostoma* dalmatia  
A fair few, with a scattering  
of blue and orange ones  
& some red ones;  
With roses, greenish ones  
that run over in the  
morning.

*Rhynchosciara americanica*  
*Leptocera subridata*  
*Dalmatia leucostoma*  
Can see the larger & flatter  
but not the smaller ones.  
Probably the Williams  
specimen.

Whitfieldella cyathula  
very & rather typical  
also I saw this from.

9:00  
12:15  
1:30

Brasfield  
Left over from yesterday.  
But lots of roses  
Pleotrichia sericea  
Cyanophrys aurata  
Dalmatia elegans  
Italy striped sphinx  
roses  
Cyanophrys  
At the locality, Brasfield  
says the roses are very  
as types in the chesty  
Brasfield. The types  
were not obtained in  
the roses but the  
chesty zone.

Cat. Orchard  
Dactyloctenes  
Cleistes morestica  
Glycera subridata  
Thrichostetha subpunctata  
Whitfieldella annulata  
Pteronea emarginata  
Little mud flies on  
red roses above one  
mound here.

SW of Shady Spring  
W. of Middle Fork  
thin shaly layers

14 feet { massive  
Coral { massive  
12 ft internal limestone  
5 ft indurated clay rock.  
46 $\frac{1}{2}$  in. last named  
bridge.

One mile west from  
Bridge bottom, road  
between 5 ft & 6 ft above  
base of bridge section.  
East of town about 1/4 mi.  
65 ft. Bridge from base  
of bridge to base of  
cliff side, 10 ft as  
at locality west of bridge.

12 ft massive crinoidal  
limestone, going up  
7 ft on cliff about 6 ft  
from base of bridge  
in cliff about 10 ft high  
20 ft water not  
deep going up  
7 ft in cliff going up

cedar Chapel N 3 $\frac{1}{2}$  mi. W. 2 $\frac{1}{2}$  mi.  
W. of Middle Fork (21)  
2 ft. D. sandstone bed, c.

11 ft in fer role  
Lent of house 3 ft and 9057  
1 ft white l. sandstone

Coral, shaly limestone

shaly, frags of

Shallow sporrids,

24 ft massive lily? with  
lobes

14 ft white thick bedded

3.5 ft thick bedded l. l. bed

2 ft. solid B. l. shaly

20 ft. thin shaly B. l. bed,

27 $\frac{1}{2}$  ft. Coral bedded

road junction 799

SW of Shady Spring

small celled & rounded

shallow sporrids

21 ft. bedded small

16 $\frac{1}{2}$  ft. upper part more solid?

11 ft massive rock,

15 ft massive coarse gravel

14 ft upper B. l. bed

5 ft. shaly fossiliferous bed

13 $\frac{1}{2}$  ft massive B. l. bed

road junction

2 $\frac{1}{2}$  ft. massive B. l. bed

5 $\frac{1}{2}$  ft. indurated clay rock.

N of Gravelly creek,

Sinking Spring road

82 ft. Calciferous limestone

3 ft massive limestone

4 ft clay shale.

15 ft. Massive limestone.

SW of Sinking Spring, at

Homestead locality,

Both bridge and base

of bridge east of bridge

are 21 feet above

creek (825 ft above sea

level) = 746 ft from

bridge level.

Of 95 ft indurated arg. layer = 762

Ginged esp = 21 feet

above bridge level 773

. . . . . 774

37 feet above bridge massive

limestone, whitish, with

Cladopora near base

of mud.

783

58 feet to top of massive

ledge.

804

64 feet = base of next

massive ledge.

810

73 feet to top of massive  
ledge. White  
may be same rock.

819

784. Base of next cliff  
much bedded

824

96 ft to top of massive  
Halysites massive 842  
small called Favosites  
Striatus fossil.

First road N of last exposure

16 ft above bridge is  
richly fossiliferous  
chaotic limestone.Bridge = 738 + 16 = 754  
for faunal esp.Base of bridge over  
indurated clay layer  
at this road crossing  
1/2 mi N of Homestead  
Locality = 755Going E from bridge 758  
the crown of ridge with  
Cladopora begins  
at 784This crown of varied  
rock is exposed on

limestone as far as  
as 792,

Interval without exposure  
ascend up to 799  
Bishop limestone  
comes next.

At next level 807  
there is a depression & a  
more coarse limestone  
layer.

At next level there is  
a fine grained lime  
stone layer that on  
which I found  
Pentamerus elsewhere  
where. — 816

Next up to brecciated  
rock 822

White limestone in  
part dense, and in  
part brecciated at 844 ~~874~~  
Top of layer 844

Top of last exposure: 849  
Top of layer 854

466  
465

West of Porter's Mill.

Road corner 853 Bishop limestone  
Metcalfe 844  
Top of bluff 837  
Base of projecting ledge, 829  
Cladipinace, 819-823  
Base of l. exposure 816  
Bridge at Mill 801

East of Porter's Mill.

Opposite house 860  
Base of limestone rock, 843  
Top of shaly limestone rock, 838  
Base of rock above face, 834  
Top of falls 828  
Base of massive l. 817 Cladipinace  
Base of red exposure 811  
Bairbridge Ch. &  
Quarry  $3\frac{1}{4}$  mi S of town  
center.

1160 Sunbury exposed 12 ft.  
1148 Berea exposed 14  $\frac{1}{2}$  ft.  
1134 Bedford + unexposed 105 ft.  
(10 ft. clay at base of Bedford)  
1030 Black shale calanched 290

Bainbridge 12 mi S.  
Just on Hill section  
Silty shale = 18 ft  
thick.

Purple clay shale  
at mud and from 1245  
to 1220 and occurs  
also, possibly by skipping  
down to 1170. This is  
the purple and light  
green shale in the  
Canary Shale area.

Above 1245 to 1300  
is a considerable thin  
sandstone - clay shales

Wappan Shales

Greenfield 245 PM. Hillsh.  
7.38 AM East  
7.38 East

Bainbridge  
Monroeville RR station,  
Wmroe along RR  
N of river, above  
tide level.

Cut cross in creek S of  
Humboldt station  
about 100 yds or  
at least 3 of house in  
E side with good  
lime banding off  
N of house and road  
N of Humboldt about  
a mile of Monroe  
in creek bed of RR.  
Fairly thin road  
crossing,

Yesteray, 1 mi E at  
anticline on creek N of RR  
Briniodol & Trilob.

Small called Fannites

Calcareous

Small ribbed trilobites  
Platytrilobites with 2 lobes  
sides and 7 or 8 on back  
side of sides

Rhynchonellae like form  
with 2 lobulations only  
in folds.

Leptamerus

Spotted for transverse stripes  
Coralites rapidly enlarging

Base of Lillooet member.  
6 1/2 ft transition rock, indurated & clay layers interbedded increasing to 12 ft upstream.  
Probably an unconformity.  
11 ft shaly sandstone  
rock, <sup>intercalated</sup> with  
creek.

The Lillooet member is massive here, coarse-grained and with clay shales and all fossils found at the Cambrian type area.

New Vienna  
Snow Hill, N. from  
then NE 1/2 mi to  
Greystone quarry.

Small-celled *Syringopora*  
as at Cedarsville found  
Springfield  
Canyons, few  
other corals as at  
Springfield.

*Barrandella ventricosa*,  
The Stromatodes

with confluent  
cell septal stria  
and in an undulating  
surface as in Draine  
&c. formation.

### Swisshelm Pebbles, O.

Monroe at Latham

just below mouth of  
Grassy Fork, about  
2 feet above creek level,

West end 1 1/2 miles  
W. of Pisgah church  
road.

Lyell's  
13 1/2 ft shaly limestone  
with *Plabellia* in  
Marine limestone

West of Pisgah church  
W. of Turkey creek pile,  
8 ft above base of B-2 *Pentamerus*  
bed, 1 ft above base but not  
in any place.

11 ft massive chert bed.

→ *Orthis flabellifera* c. 890

16 ft overlying black bed 875

10 ft interval B-2 bed  
creek 865

Hilltown,  
Willington road  
1 km SE of Down's Chapel  
Pentamerus in situ at  
1150. with gravelly  
granulite boulders  
now greenish  
diluted beneath,  
stromal fragments 2 mm.  
abundant, others  
in top of hill are worn  
abutments bed - Helictites  
abundant, 5-10 mm.  
tendrils, small celled  
Downy, ~~large~~ crenulated  
stems, ~~large~~ *Arthrophyllites*,

Irvin's chert.

3/4 mi SE is Pentamerus  
abutments at 1152

SE on E side of hill, 5  
abutments rock  
with clayey soil  
toward base, in  
cheating others flaky  
lites, Stromatoporoid  
small celled Downy  
Helictites in tectonites  
as at locality  
described above

This outcrop of abutments  
runs on road  
west of C's gate  
house, S side of  
Marshfield 3 mi.

Further SE on road  
E of road about  
hundred yards to  
Bisher, on road  
1 1/3 mi SE of Hilltown.  
Downy SE, of rock,  
the very shaly top of  
Bisher occurs from  
1100 to 1120 ft. alt.

Hilltown

1/4 mi from where  
Downy fine leaves  
turn, S of hill  
1120 = base of Pentamerus  
Layer at base of a downy  
hill

Bodgville, straight east,  
1 km E. Top of platy  
chert, at house & road =  
1000. n.s. & S. band  
from this point west  
wedges up to 1040.

This should carry the section up into the lower Cedarville but none was identified with certainty.

1 mi S of Berryville the elevation reaches 1100 ft in 60 ft above the top of the Chester Bluff.

1 1/2 mi E of Berryville the West Branch Creek bed contact is at 930

1 1/2 mi E of Berryville on E side of same hill as last locality.

The West Branch Creek bed contact is at 912

at 1 3/4 mi E of Berryville the West Branch Creek bed contact is at 905 mts. on the bed contact  
bed a clay at the surface at 960 m which is a

not accurate  
Cedarville occurs  
to the south 2 miles E of Berryville where  
valley broadens in from the south west

Strata open to the are common 3 mi E of Berryville, where road turns off NE;

1 mi E, straight N to creek, 1/2 mi N on creek bed sand but 1/2 miles in valley are fine.

Turn E 5 E to where road ends then straight S with lane leads off E to old abandoned house on Middle Fork.

SE of house, in valley the Bluff is underlaid by 1/2 mi thick clay rock as seen in Sunk Valley Spring, at 825 ft.

Wrote this house  
the whole hill  
side is full of  
various kinds of  
fossiliferous rock  
recovered by me as  
specimens for the pres-  
ents.

At Howell's house to  
964 above then east

Forre Hill brown sand  
964-964 Stromatopores  
964-958 crinoids  
958-952  $\frac{1}{2}$  hard limestone  
Habicht's rock is a large  
stromatoporiferous rock  
952  $\frac{1}{2}$  - 952 Bivalve  
l. for a stromatoporiferous  
+ bentonite with  
lime, at 952

Stromatoporiferous  
Bentonite. Several

952-949 Rock similar  
little of it like to

Bentonite rocks  
Lithology 949-943  $\frac{1}{2}$   
with clayey sand  
and other sand at 943

to possible sand clay  
atypa setiferous  
gypsiferous.

943  $\frac{1}{2}$  - 932 Sandy  
shaly clay with  
clayey sand +  
gypsiferous small + large  
shells

932-930 Marine  
gravel on limestone  
in the bottom of a hollow  
+ large sand + shell  
fragments + limestone  
till on. Same as the  
hillside west of  
house reached by  
going from south  
end of Howell's east  
1 mile toward Middle  
Branch.

930-925 not exposed  
925 rock with large  
globular stromatoporiferous  
sand in place.

925-905 Same coarse  
grained lithology rock  
as above

Then on E. side of  
the main balloon.

Both fine sand & 2 dolomites  
5' left. Siliceous limestone  
very abundant.

11 ft. arg. from 10 ft. sand at base  
at 60 ft.

3 ft. sand. Liley limestone  
10 ft. sandy clay.  
16 ft. coarse & rounded limestone  
many large forams to  
11 ft. coarse & rounded limestone  
no large forams to  
E of Hillstrom on  
Liley Hill.

Top of sand at top line  
5 or 6 ft. brownish sand.  
4 1/2 ft. white sand  
6' left. 10 ft. brownish sand  
16 1/2 Pentamerus in brownish  
mineralized limestone.  
Glossy surface of the limestone  
E of Hillstrom on line.  
5 ft. Pentamerus  
like that above  
sand.

Plain river sand, 3 mi  
N of Hillstrom on Liley  
Balloon

Siliceous limestone 14 ft.  
3 1/2 ft. interval.

2 ft. brownish limestone  
9 ft. Pentamerus 2 1/2 ft. 1104

Sand with  $\frac{1}{2}$  in. to  
top of very dry brown hill  
house & 10 ft. sand & 10 ft.  
road to 5 ft. sand. Hill  
House 1104. Hill house  
interval 66 ft.

Pentamerus layer.

Interval at 1104

Liley. brownish sand  
grained. Grained to  
full of cladoform. Also  
one good bed of flatellite  
Strong east wind drift  
of Liley. In sandy  
top one only house & other  
houses in sand & sand

Section down creek fine  
at sand bed opithidium young  
SW 1/2 rock young, the old  
yellowish

Base of Liley young.  
64 ft. interval.  
2 ft. sandy from 6 ft. sand  
10 feet basal Birket

My type locality for  
Birken fossil means  
first before entering  
forest on going south  
Ward down hill on  
It is on the side of  
hill now.

### Hilltop Hill.

at top of hill in Ward

Hilltown road.

Interval 8  $\frac{1}{2}$  ft.

base of Cedarville bed

Hilltop clay - 3  $\frac{1}{2}$  ft

Hilltop s. - 12  $\frac{1}{2}$  ft.

Int. bed. 64 ft

Best fossil bed 2 ft

Blue of Birken 10 ft.

174  $\frac{1}{2}$  ft. - Crat

Extended to Hilltown.

92 ft. - Crat bed on

to cedarville.

Saylon collected a rock

W. Livingston college  
It contains a large cepha-  
lous, head.

head 8' 2 inches wide  
and 3  $\frac{3}{4}$  inches long  
from just above  
upper dentellae in a culpt.  
as shown in Illustration  
of Illustration of Illustration  
in Illustration.  
Also large fragments  
of same, probably  
fibrillary.

## PILLOWS

nestch eggs

Now I made 2 mi.  
W, a road turns off  
N to Buffalo cave.  
SE of road cross,  
on land of Ida  
Brown, only a few  
hundred feet SE  
of road cross, is  
the pillow egg  
locality on south  
side of Great Bend  
of Dove River.

## Spalding Springs

2 1/2 mi N of Spalding,  
on D. J. Stanley farm,  
W. of house, 1/8 mi. N.  
along west side of  
creek, in cliff.

Bottom of ravine a Dev. 20

12' 1/2 ss

## Formation

Mississ.

Shale      slate  
Sp. for.      greenish 12'  
interbedded with  
5' sand 4 1/2 ss

1/2 mi S of section above  
Sp. for. & clay sh. occur in  
top of Dev. 20, under the  
Dev. 20.

## Spalding Springs

1 mi. N. of Spalding,  
O'Keefe farm, SW  
of house.

Sp. for. & clay sh.  
within 10 ft of  
base of Dev. 20  
in sand bed and  
limestone

The D. J. Stanley locality  
lies 2 3/4 mi. exact due  
N. of Spalding Springs.

The Shirel Dr. or coral  
locality lies 1 1/4 mi  
exact N. W. from the D. J.  
Stanley locality.

The D. O. Latham creek  
locality is 1 mi. N of  
Spalding Springs and  
thus 2 3/4 due North.

This suggests that the  
top of the top of the  
Devonian section is  
a NW direction, when  
start a very added  
to the top.

	17	16	15	14	13	12
*D. O. Latham						
*Shirel	20	21	22	23	24	
*D. J. Stanley	25	26	27	28		
*Spalding						

Bluff do 1/4 mi East,  
South of Blackley  
house.

8 ft Devonian limestone  
Main Accretionary  
limestone

17 ft Devonian limestone.  
3 ft, Favosites branching,  
and other coral fossils  
5 ft. Devonian sandstone.  
← Basal sandy limestone  
stone with Devonian  
Spirifer, bivalve shells  
Favosites, etc.  
Fine grained Devonian  
(No fossils found in it, Givspur large Com's Fossils.)

From the Bluff do Coral  
locality go 3/4 mi. E  
to locality where do  
at top of limestone with  
is about 9 feet  
green I found Recip.  
Favosites at top of  
limestone the sand.  
Devonian to about

Younger fauna. 5 1/2 mi SE of  
New London, Upper Platform,  
Petrified large Encrusting  
form, *Spiriferites filineatum*  $\Delta$   
*Picardella* (N of Spencerfield)  
Other fossils are  
Spiriferites like one seen  $\times$   
Ornatus  $\times$   
Subulites or *Travertina*  $\times$   
Terebratula small  $\times$  recurved  $\Delta$   
Hibonites  $\times$   
Conradella *lineolata*?  $\times$   
Streptopora *sericea*  $\times$   
Thamnopora *functifrons* var.  
Clethamites  $\times$   
gasteropods  $\times$   
flat shells, conical  $\times$   
Givspur large Com's Fossils.  $\times$

Stephen W Jones  
1 1/2 NW of Frankford  
on creek bed, gathered  
a lot since last  
top of Platth.  
Rhynchonellids were  
small form of *truncata*

Frankford, Belvoir RR  
level, E of town.  
+ *Dalmatilla argata* ?  
Gerrichicas on surface 30 ft down  
+ *Platyzia* (?) also at surface and  
+ *Strophioleucosia* in curvata  
+ *Plectranthodes* c.c. 12 ft down  
+ *Rhynchites* leaves in crevices  
+ *Dolichus meedsi*

at and above RR  
level is Receptacle to  
common.

Frankford, N 1/2 mi. the  
E to back of old tract  
center of 26 (now a  
farm house) and  
the NE 1/4 hill  
across small valley

Receptacle to  
inner edge of yellow  
horizon in which  
*Plectranthodes* and  
*Dalmatilla argata*  
are very common.

W.T. Jackson farm 2 1/2 mi  
NE of Frankford along Penn creek.  
*Plectranthodes* c.c. X  
*Dalmatilla argata* c.c. 6  
*Dolichos meedsi* 2  
*Platyzia metopica*  
*Ceratrus*  
*Lathyrus* *Cracca*

Receptacle to 100', one pink  
but certain are pink  
above the horizon with  
fruits listed above.

Henry Hamilton farm  
due E of Frankford

Soil of hill in  
smooth boulders, dry soil  
*Ceratrus* high 12 ft. 6 in.  
*Strophioleucosia* in curvata  
Common to all the pink ones

Base of Rhine's ridge  
*Dolichos meedsi* X  
*Dalmatilla argata* 7  
*Rhynchites* *Thlaspi* *arvensis* (?)

W.H. B. afternoon, 3 mi SW  
of Grandfield, up w. fork  
of Peno creek.

Spireifer not common  
W of New London.

Five stained beds  
of limestone  
Dermatina, No fossils  
5 ft sandstone in layers  
1 to 2 inches thick, no  
fossils

50 ft est. on side of the stream  
of Cincinnati ab. shale.  
4 ft coarse grained l.  
with *Illacme* with large  
eyes and a pair of  
grooves between eyes  
forming long brows.  
Also what looked like  
Heliobolus but fossil  
but not certain.

Top of Rimonmouth =  
white limestone in thick  
large fish rippled  
major Macbrane,  
but no *Reciprocacolites*  
will further down  
the section.

He Cone, 1/2 mi West.

*Spiriferina* *angulata* large  
*Streptelasma* x  
*Spiriferina* *lanceolata* with large  
tubular siphuncular tube  
*Streptelasma* *lanceolata* ?  
*Reciprocacolites* x  
*Spiriferina* *angulata*  
Burying G. 2 ft sand.  
and 3 mi N of Riven,  
Rimonmouth 1/2 mi NW of  
Lima, in bed of stream.

Am. & Tid. 3 mi  
S of Melton (4 mi  
S of church)

*Dermatina* fossil bed  
approximately 10 ft. *Bivalve*  
Coat of fish scales  
*Illacme* *angulata*  
*Ostrea* 15 ft. ab. to  
1 ft. ab. *Reciprocacolites*  
at deeper part go in  
and out of a *limestone*

2 mi N of New Haven  
**OSTRICH EGGS**

at west end are cross-  
ripped limestone blocks  
with 5 elevations in length  
of 8 inches, at top of  
bedrock layer.

Restrich eggs are  
above the brecciated layer,  
in a sand-free grainy  
rock.

at this West end the  
fine grained rock is  
apparent to be folded over  
the eggs which run  
a NE direction. The eggs  
are also tilted in a  
NE direction.



This elevation  
takes place in an NE  
direction and at the  
west end of the  
exposure but here  
the eggs are tilted

together.

The ostrich egg layer is  
1 1/2 ft thick, in clad  
by the high part  
of the eggs.

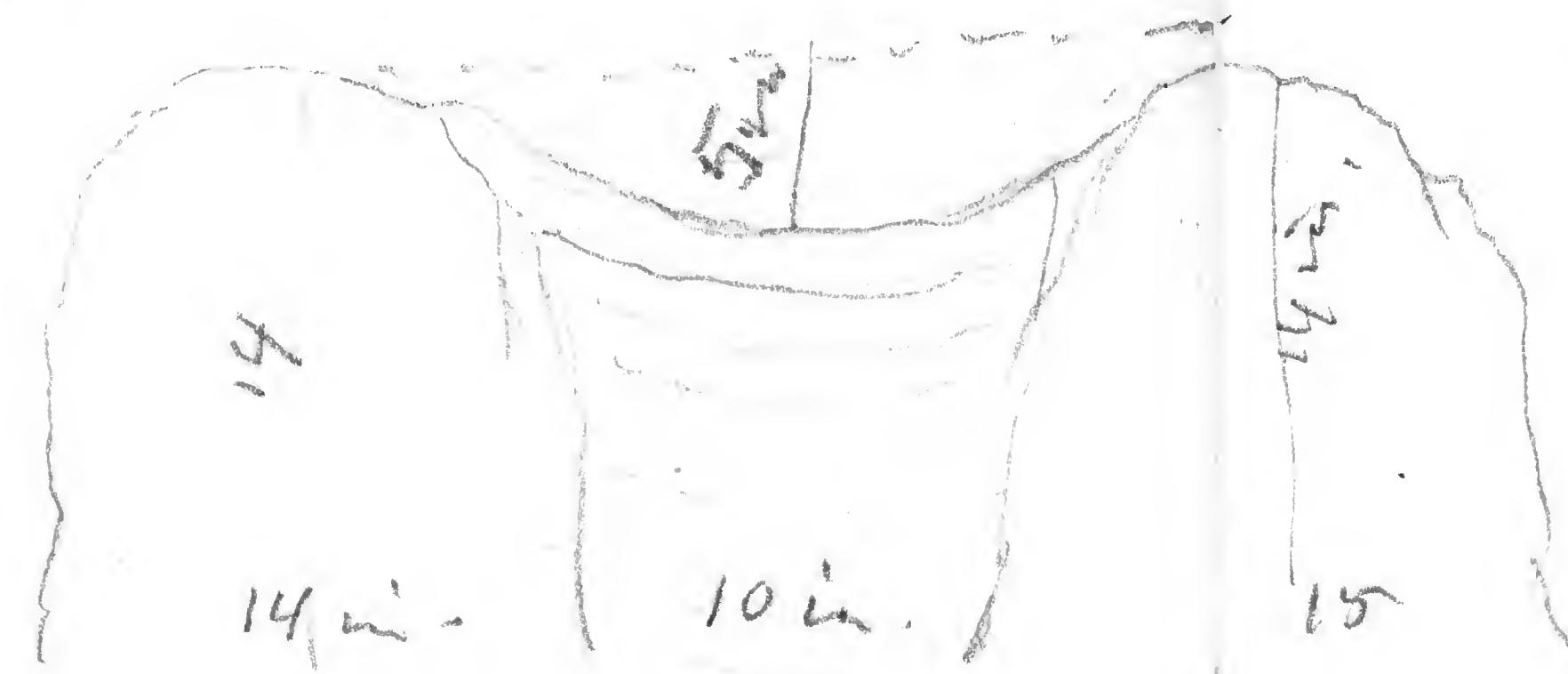
Normal eggs are  
1/2 when they are  
crushed to 2 ft over  
or mostly in their  
shorter diameter.

There are 4 ft in diameter  
and less for make up  
less than 1/3 of the  
total number.

Ratio of length to width  
= 2 to 3 for the wide  
round ones to 1 to 2  
in more elongated  
ones.

Elevation of egg layer  
5 inches, top 12 and 18  
inches.

Ostrich eggs on  
Charles Brown farm  
8 of these about 10 yds



Shows that egg stage is vertically, followed by deposition of men.

Same as above.

Frankford 3 miles to  
Richmond beyond  
with golden yellowish  
Dwarfed sub-shrub with  
fluffy stipules &c.  
Rapeseed.

1/6 mi east of crossroad

Sugar Creek  
4 1/2 miles east of  
Frankford.  
*Ischaemum*  
*major*, found  
by Heynean.

Receptaculites -  
Trifolieraceous

Is any Platia  
in Pitt Co?

What are  
M'agman  
mohairisms  
Where can I  
find good bed  
strata for each.  
Where is one  
tributary found,

West of town W. of road 7<sup>th</sup>

Burking Green 20 or 25 ft.  
Cyrene Watson  
Watson x Cyrene \*  
Noix \*

Spring at Granger's  
Cyrene on Watson's front

Cyrene on Cal. Wiggin's  
place Schubert's  
& Abbe's

Watson - Atteka

edgewood for plenty  
of fossils go down  
to John McCann's  
house and then toward  
split road down hill  
from barn, toward  
creek, go down to  
fork and go up a  
next fork with  
 $\frac{3}{4}$  mi of edgewood

Rare fossils in Gordon  
place near Calumet P.O.  
in bed of bramble &  
base of magnolia

about 3 or 4 feet  
above base, below  
his apple orchard

\* climb

be to house, then N  
of house, at foot of  
slope.

Cal. Wiggin's

Auburn chert beds  
below Receptacle auto  
beds.

Dalmanella perotensis  
Auburn is in brack.  
water,

Sulphur creek S.E.  
of brakely.

Auburn is higher side  
of these hills

54° B. 100' E. of Hwy 54  
7.10 am 3,080 ft. S. earth 6,00  
12.15 N 7,080 ft. N. of Hwy 54

Freight  
P.M.

To You - some from B.C.  
9.10 am. 1.40 P.M. 11.20 P.M.

String West

1.45 am. 1.10 P.M. 5,500 ft.  
Anklyognath. 1/4 mi.  
N of Autron ~~aff~~ Downing  
Tome like ~~of~~ of Autron  
Tritylites ~~of~~ type  
\*Refines ~~and~~ the anisostatic  
Hedbergina  
Calcareous with muds, shds  
\*Strophomena incavata  
Lingula  
\*Strophomena  
Hedbergina ~~and~~ Downing  
Bathy corals  
Narrow cylindrical  
aff. white structure with  
?dust but septa, will  
may be Beatria.

Opp. Downing, Hwy  
End of State Hwy  
4 mi. N of Hwy 54  
N of Autron.

Silts.

Burlington at quarry on  
hill 1/4 mi S E of town on  
E side of railroad, just beyond  
creek. Our fossils lie just on  
crest of ridge.

Edgewood locality.

From Edgewood cross  
track. N, just E of depot,  
and follow road E to  
John McNamee house, on  
N side of road, just before  
reaching bend of road  
toward SE. Along this  
SE part of road is  
exposed white limestone  
at one supposed to be  
Chowanian limestone  
by me (mislabelled as Nagatan)  
This road goes to a quarry  
is greenish grey shale  
containing *Spiriferina*?  
and regarded as Henson's  
shale (mislabelled as  
Hudson River).

Fossils shipped for absent  
*Lingula* May 22,  
2 blocks after last tide.

## Cyrene

From S E corner of town

High road north of east

Hole Boulders &amp; exposed

(Chert &amp; flint) &amp; talus

at a quarry

## Profile R.R. valley

1. ~~Chert~~ ~~Chert~~ Chert talus

2. Chert cherts of Silur

3. ~~Chert~~ exposures near

Chert talus

4. ~~Chert~~ Chert. May be marble5. ~~Chert~~ Chert (just 1/4 in)6. ~~Chert~~ talus

for Hudson river

7. ~~Chert~~ talus mostly  
in the Co. where?

8. Chert talus where?

9. Chert talus

10. Chert talus

11. Chert talus

12. ~~Chert~~ talus at base  
of talus13. ~~Chert~~ talusHagans blacksmith shop,  
corner to Spalding's <sup>57</sup> R

1 ft not exposed,

1 ft. Receptaculites.

(Sphagnum major or mediterrane).

Marl bed. Clayish fine-grained.

1/2 ft Receptaculites.

← Streptolasma corniculatum

1/2 ft Receptaculites in the

← Sphaerula gibba, bright

1 1/2 ft white fine-grained.

← Receptaculites.

Top continuous section

2 1/2 ft sandy bedded Det. b.

Limestone at ground level.

14 ft fine-grained Det. limestone

5 ft clay shale. Hudson river.

6 inches hard sandstone Det.

1/2 ft probably clay shale.

15 ft Rather coarse-grained as.

white limestone pebbles.

16 ft Sandstone with fine-grained

R.L.

Small Dor. ss, thin  
out SW and the ~~12-2~~  
Upper Devonian ss,  
thickens SW, 4-20 ft.  
East side section 19.

On W. S. Sonnenfeld farm  
3 ft Devonian blue dolom.

1 ft very light bedded  
Dor. limestone

1 1/2 ft clay shale Dor.

1 ft sandstone Dor.  
C. H. Lenox, near center of  
section 19.

at foot of tree & glaucony  
capping, W of creek.

Favorites. W of N + S road.  
horizon collected before.  
is rich bed  
West 2 mi. at home of Abe  
distance 1/2 mile

Dev. Sandstone (20 ft thick)  
exposed almost as far N as meadow.  
8 ft + and up following cliff -  
2 ft dense limestone, heavily  
irregularly bedded  
3 ft sandstone + shales.  
2 1/2 ft sh. clay + sandstone  
Brecciated  
5 ft yellow limestone

New York on N across  
salt river, then N 2 miles  
to where stream crosses  
road to south edge of  
section 13 on H. L. Y.  
Henderson farm  
Top of Devonian l.,  
exposed W of bridge  
Then go down about  
20 feet to exposure  
in stream SW of  
Abe house,  
and about on a level  
with foot of tree NW of  
foundation of house,  
house no longer. In  
this creek level is  
at instant Mac Creek  
cross some other  
lower alluviums  
and a few steps.  
This breccia is about 3  
1/2 mi E of Mac Creek  
Then go to foot of  
tree mentioned above.  
Here is fossil Warren  
the again.

Then go down about  
10 feet to just beyond  
that road crosses

Here I suppose is common on. The branching form is but a variant of the more globular forms. Even the latter is strongly nodose.

Then for about 25 feet to bottom of a P. Madolite.

Here is base of brecciated rock. L. A short distance further southward is top of P. Madolite.

This ss. may be 24 feet thick and be exposed as far as point E of C & H Lewis house.

Below this is at least 4 feet of limestone also recorded as D. lymanii, since it is brecciated, but it might be C. d. macroura. See page 58 for additional notes on these formations.

Hovley Henderson farm above D. er. l. and under a fine glained sandstone bed about 6 inches in thickness, near middle of which is a layer of thin shaly coal.

### Bryozoan Care

*Protogenia bipunctata*  
*Ceramus* n. sp.  
*Schizocrania*  
*Plectostomus semicacus*  
*Gibbus micromorphus*

### Shiel

Spalding Spgs. 1 mi N & 4 miles W along straight line to a horizontal bed 30 feet E of Shiel.

Do Y at. over limestone  
Spalding Spgs. 2 1/2 mi  
and 1 mi W to locality

Spalding Spgs.  
New London 2 1/2 mi N  
then 6 1/2 mi W on  
straight lines W.

62

abc McFarland &  
Hawley from Dawson

Winden River shale  
Wm London NE to  
Crossley on S side  
river, W of RR, then  
angling NE to salt  
River Sm Lake Sta-  
tion, then E 1½ mi,  
Smy' son mill.

at  
Wm London  $2\frac{1}{2}$  mi  
SW of N, then  
2 mi straight E in  
eastern half of 27,  
somewhere.

Very thick bedded  
white limestone  
becomes at one time  
brownish red shale  
mostly in bed  
from where near  
High Banks  
Place

Judge Spalding  
Dr. Gallagher  
really St Peters

63

Sheppard & S Swartz  
Wm Lee & son  
Wt others of them  
Refers to it as  
St Peters.

Yorkup Swallow.

64

65



E 1959 Diary



GENUINE LEATHER

1262

